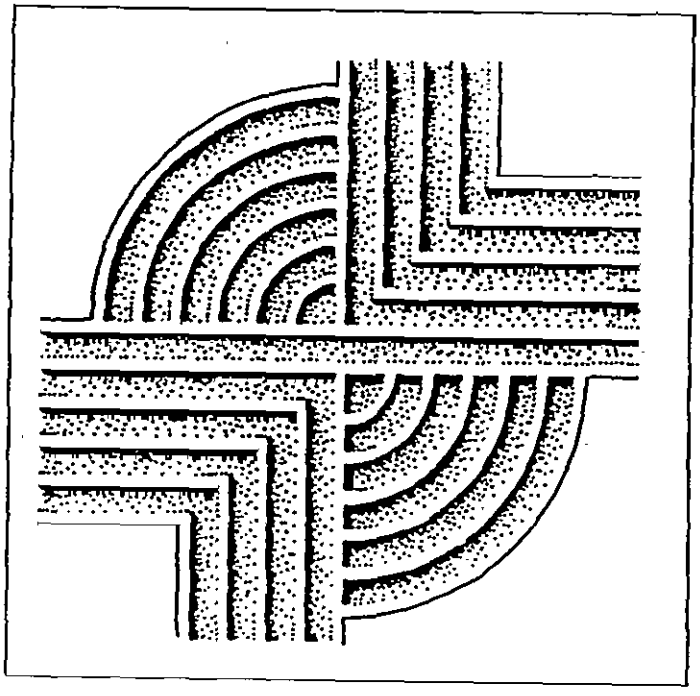
AN INTENSIVE ARCHAEOLOGICAL SURVEY OF THE PROPOSED SPINDALE WASTEWATER TREATMENT PLANT OUTFALL CORRIDOR, RUTHERFORD COUNTY, NORTH CAROLINA



CHICORA RESEARCH CONTRIBUTION 247

AN INTENSIVE ARCHAEOLOGICAL SURVEY OF THE PROPOSED SPINDALE WASTEWATER TREATMENT PLANT OUTFALL CORRIDOR, RUTHERFORD COUNTY, NORTH CAROLINA

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ABSTRACT

This study presents the results of an intensive archaeological survey of a 1.25 mile wastewater outfall corridor located along Hollands Creek between the Spindale Wastewater Treatment Plant and the intersection of Cathys Creek and Hollands Creek in the northeast portion of Spindale, North Carolina. The survey corridor lies exclusively in Rutherford County, North Carolina. The purpose of this investigation was to locate any archaeological sites which may exist within the survey tract and evaluate them for their eligibility for inclusion on the National Register of Historic Places.

Examination of the site files housed at the Office of the State Archaeologist of North Carolina indicate that, although past surveys have been conducted in the tri-city area of Rutherfordton, Spindale, and Forest City, only one

As a result of these investigations one previously recorded historic site (31RF111**) was relocated on the project corridor. A late-nineteenth through early twentieth century bridge abutment, site 31RF111** is recommended as not eligible for inclusion on the National Register of Historic Places, pending on the concurrence of the State Historic Preservation Office.

As always, it is possible that additional, but unidentified, resources may exist on the survey tract. Consequently, the contractor for the construction of the proposed Spindale Wastewater Treatment Plant outfall line is cautioned that if any archaeological or historical remains are identified during any future construction, all work should immediately cease and the identified remains should be reported to either Chicora Foundation, Inc. or the State Historic Preservation Office.

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INTRODUCTION

Project Background

This survey was conducted by Mr. William B. Barr of Chicora Foundation, Inc. for Mr. Kelly B. Sellars of B.P. Barber and Associates, Inc. The project area is located in Rutherford County, North Carolina (Figure 1) in the northeast portion of the city of Spindale, North Carolina approximately 4 miles east of the county seat, Rutherfordton (Figure 2). The survey tract is bordered to the north by Old Ross Road, to the east by a portion of Hudlow Road and Cathys Creek, to the south by Shennandoah Street, and to the west by Ecology Street.

Topography in the project area consists of moderately to severely sloping terrain which terminates at the flood plain on the north and south side of Hollands Creek (Figures 3 and 4). The entire survey corridor moderately slopes to the east and farm terraces, used for erosion control, were found in portions of the project area. The Spindale Wastewater Treatment Plant lies on a moderate bluff just west of Hollands Creek (Figure 5). Site 31RF111** lies northeast of the existing bridge constructed over Hollands Creek on Old Ross Road near the eastern end of the survey corridor (Figure 6).

The project area is currently proposed for the construction of the Spindale Wastewater Treatment Plant outfall line. As a result, we anticipate potential disturbance from clearing and grubbing, grading, and excavation. This work has the potential to seriously damage any archaeological remains which may exist on the property.

This study was initiated to provide a detailed explanation of possible archaeological resources within the 1.25 mile project corridor. Specifically, the study was intended to:

- locate historical and archaeological remains which may exist on the tract, and
- to provide an assessment of eligibility of these sites for inclusion in the National Register of Historic Places.

Chicora received a request for a budgetary proposal for this intensive archaeological survey from Mr. Kelly B. Sellars of B.P. Barber and Associates, Inc. on February 24, 1998. Our proposal, dated February 27, 1998, was accepted on March 10, 1998.

A request was made to Ms. Deloris Hall of the North Carolina Office of the State Archaeologist by Chicora Research Archaeologist Mr. William B. Barr for an examination of the site files to determine the presence of any previously recorded National Register sites, districts, properties, or objects which may exist within the project area. One site, 31RF111**, was located within the project area.

The field investigations were undertaken for Chicora Foundation, Inc. by Chicora Research Archaeologist Mr. William B. Barr with the assistance of Mr. Todd Hejlik on March 17, 1998. The report preparation took place at Chicora Foundation's offices in Columbia on March 18, 1998.

Curation

Archaeological site forms have ben filed with the North Carolina Office of the State Archaeologist. Although no archaeological materials were collected during this study, the field notes resulting from these investigations will be curated with that institution. The associated field records consist only of the project maps showing the approximate location of shovel tests and notes on soil conditions. These have been retained in

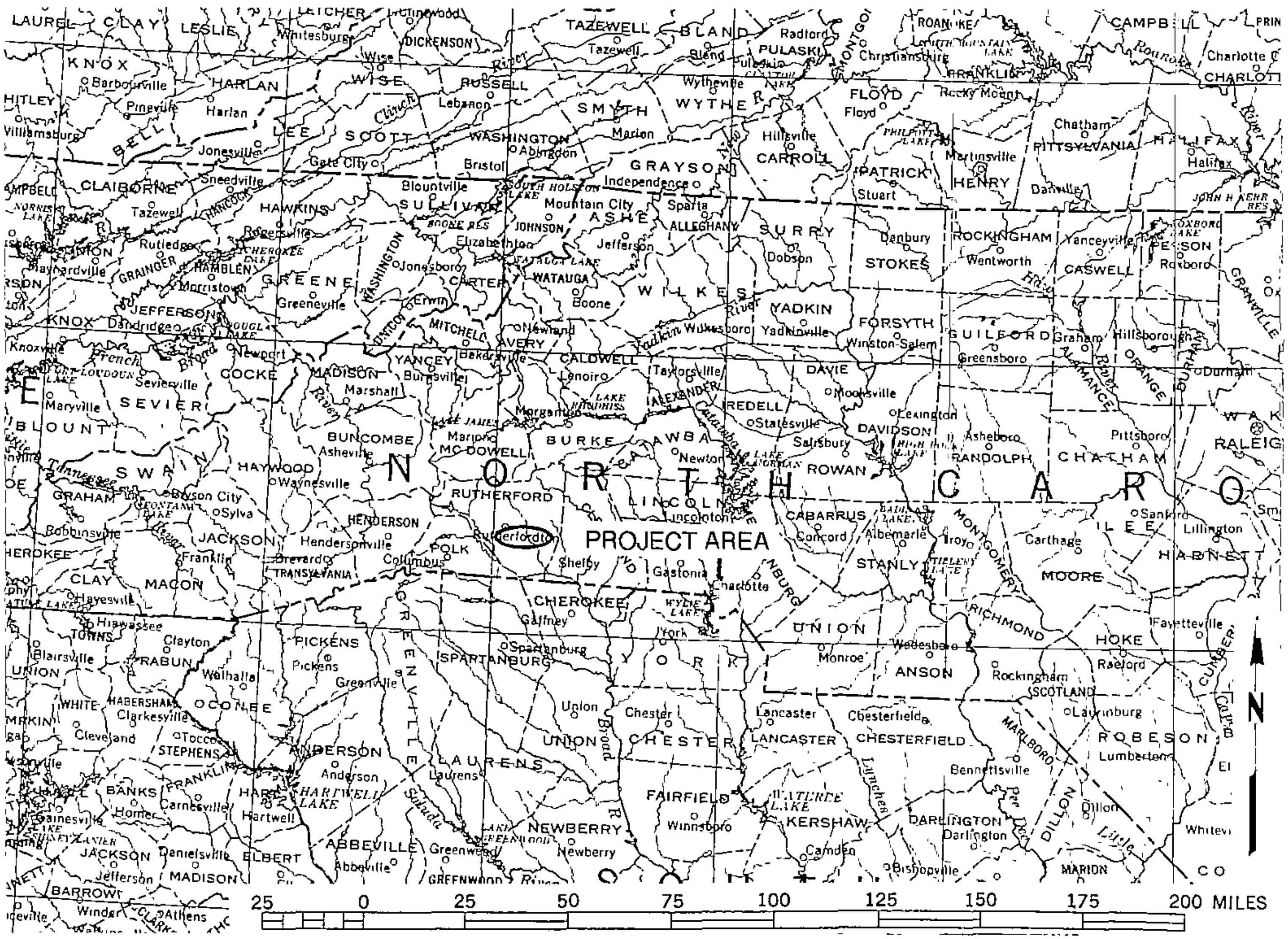

Figure 1. Vicinity of the Spindale Wastewater Treatment Plant in Rutherford County (Source: USGS United States 1:2,500,00).

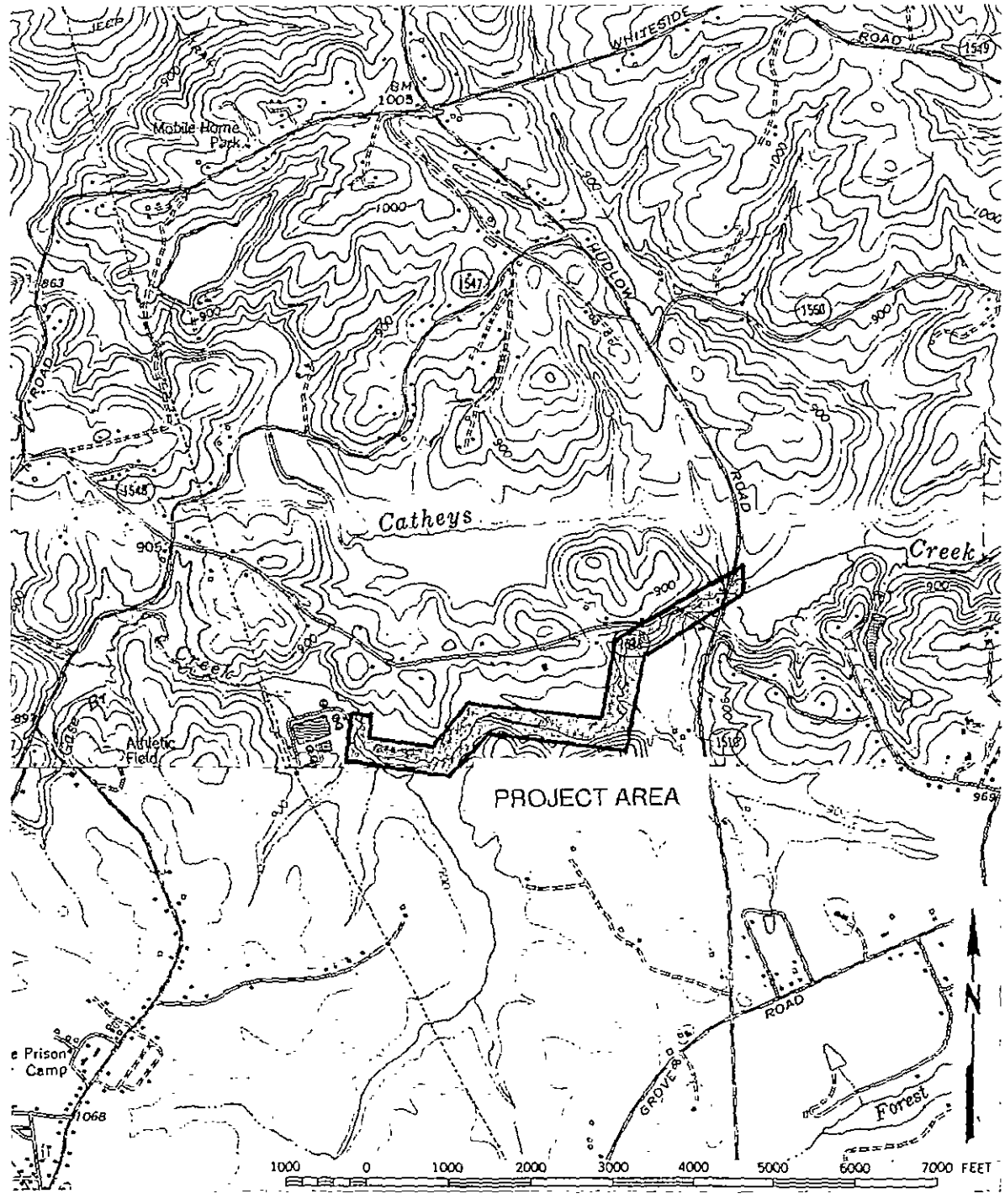

Figure 2. Immediate vicinity of the Spindale Wastewater Treatment Plant outfall line in Rutherford County (Source: USGS topographic map Rutherfordton North 7.5' 1993:1:24.000 topographic map).

Figure 3. Flood plain of Hollands Creek (view to the west).

Figure 4. Flood plain of Hollands Creek (view to the south).

Figure 5. Spindale Wastewater Treatment Plant (view to the south).

Figure 6. Site 31RF111** concrete abutment (view to the west).

Chicora's project files. Photographic materials, which consist only of color prints, are not archivally stable and have therefore also been retained in Chicora's project files.

NATURAL SETTING

Physiographic Province

Rutherford County is situated in western North Carolina about 15.5 miles north of Spartenburg, South Carolina and 75.5 miles west of Charlotte, North Carolina. The county lies almost entirely in the Piedmont, although a very small portion of the county's northwestern corner evidences steep slopes and quite rugged mountainous slopes.

The Piedmont, bounded on the east by the Fall Line and on the west by the Blue Ridge scarp, is about 142 miles wide in North Carolina. The name itself means "foot of the mountains," an appropriate term for topography which is characterized by rolling eroded plateaus, rounded hills, and low ridges. Some geographers divide the region into the "lowlands," with their generally lower elevations, and "uplands," such as the Rutherford area which is characterized by elevations up to about 1476 feet above mean sea level (AMSL).

The western section of the Piedmont includes the headwaters of several significant rivers: Roanoke, Tar, Neuse, Cape Fear, Yadkin, Catawba, and Broad. Rutherford County is dominated by the Broad River, which flows generally south through the region. The Main Broad runs on the western side of the county and then turns to the east and passes along the southern side. The Second Broad runs through the center of the county from north to south. The First Broad passes through the northeast corner of Rutherford County. Drainage is controlled by the slope of the Piedmont and is further modified by the complex rock structure of the area (including a series of northeast-southwest trending belts). Most of the major streams and rivers, once past the mountainous areas, are associated with broad belts of bottom lands of great fertility. Remnants of more resistant rock, known as monadnocks," form high hills and crests of unweathered rock standing above the more weathered and eroded terrain. The mountains rise abruptly from the Piedmont along an escarpment known as the Brevard Fault. The eastern portion of mountainous North Carolina consists of the Blue Ridge, with elevations up to about 4,002 feet and a few peaks to nearly 5,906 feet. Usually classified as open, low mountains, much of the area is in relatively gentle slopes.

The Piedmont has always dominated the topography of North Carolina, giving rise to many descriptions. One recounts that:

> the tumultuous continuity of mountains subsides into gentle undulations, a secession of hills and dales, a variety and charm of landscape, alike different from the high, uplifted mountain elevations and the flat monotony of the plains or levels of the east. Every step brings into view some new charm, some new arrangement of the rounded hills, some new grouping of the tracts of forest which still cover so large a part of the country. The hills, indeed, in their gracefully curving outlines, present lines of beauty with which the eye of taste is never satiated. These area attractions which depend upon the permanent features of the landscape, and which, though infinitely heightened in their effects by the verdure of spring and summer, are only brought into fuller relief by the nakedness of winter (State Board of Agriculture 1896:24).

The Spindale Wastewaster Treatment Plant is located east of Ledbetter Road (SR 1591), about 1.2 mile north of its intersection with U.S. 74. This places the project corridor about 2.0 mile

east of the county seat of Rutherfordton. The proposed outfall corridor begins on the east side of the Spindale Wastewater Treatment Plant and follows the bank and slope of Hollands Creek. Elevations range from 824 to 841 feet which forms a gentle downward slope to the east. The corridor terminates at the intersection of Hollands Creek and Cathys Creek just northeast of the intersection of Old Ross Road and Hudlow Road (Figure 7).

Climate

North Carolina as a whole lies within a general climatic region known as the Humid Subtropical. Moisture is adequate throughout the year, historically supporting very dense forests and an exceptional range of agricultural crops. Temperatures are moderate with long (and often hot, humid) summers and brief winters (with cold, dank conditions). Snowfall occurs, but is usually limited to the mountains. Gade et al. note that:

> air masses accounting for this climate are controlled by a variety of locational phenomena such as latitude, altitude, mountain barriers, and land and water surface differences . . . Warm, moist air from the maritime tropics dominates summer conditions while cooler, drier continental polar air controls winter weather (Gade et al. 1986:15)

In general, the Piedmont enjoys this favorable climate. The relatively moderate temperatures, coupled with adequate precipitation and generally well drained clay soils creates a setting favorable for a wide variety of crops and native plants. The average winter (January) temperature for Rutherford County ranges from about 43° F in the northwest to about 47° F in the southeast. The average summer (July) temperature is consistent across the county at about 77° F. This marked seasonal difference is almost entirely the result of the difference of the angle of the sun above the horizon during the different seasons. Precipitation is most of Rutherford County is about 47 inches a year.

The State Board of Agriculture noted that Rutherford County was an exceptional agricultural area, representing the western limit of cotton culture in North Carolina (State Board of Agriculture 1896:394). In addition, "the whole county is favorable to fruit – apples, peaches, cherries, melons, and grapes – and also to potatoes" (State Board of Education 11896:394).

Geology and Soils

North Carolina exhibits increasing age and complexity of rock types from east to west, resulting from the various periods of uplift and subsidence with accompanying erosion and later deposition of materials. The Piedmont contains a range of primarily crystalline rocks alternating with sedimentary in down faulted basins. One such area, the Carolina Slate Belt, is derived from volcanic sediments and is an important source of fine grained quarry rock as well as a range of raw materials for Native American knappers. In the western part of this slate belt, especially in Davidson and Cabarrus counties, there area many veins impregnated with gold bearing ores. Situated between the Brevard Fault to the west and the Gold Hill Fault to the east, Rutherford County is dominated by gneiss and schist rocks of the Paleozoic Era. These rocks are likewise penetrated by numerous veins which exhibit small quantities of gold ore, often mixed with copper and iron ores. The State Board of Agriculture (1896:70) observed that the South Mountains, in Burke, McDowell, and Rutherford counties were particularly noted for their gold ores mixed with quartz rock.

Piedmont soils are generally over a meter in depth and have red or yellow heavy clay subsoils. Although formed by the decomposition of very old rocks, the soils themselves area relatively young due to recent soil erosion. Differences in the soil surfaces are the result mainly of the different types of parent rocks. Although no recent soil survey for Rutherford County has been completed, the soils in the vicinity of the proposed outfall survey corridor belong primarily to the Cecil and Davidson series (Jurny

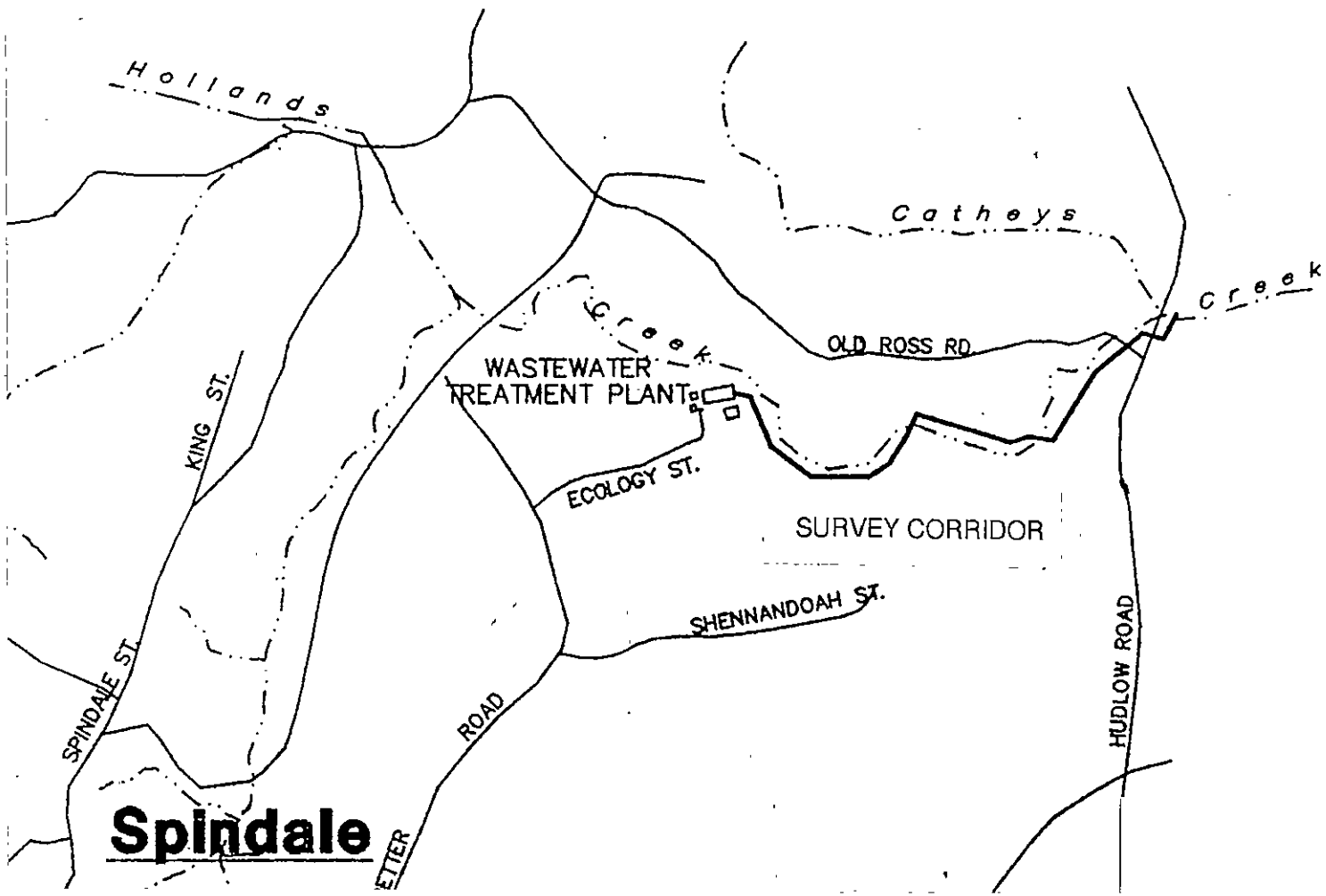

Figure 7. Proposed outfall corridor, Spindale Wastewater Plant, Spindale, North Carolina (courtesy B.P. Barber and Associates, Inc.).

et al. 1928).

The Cecil soils represent residuum that has weathered mainly from high grade metamorphic rock such as biotite gneiss and migmatitic gneiss. Commonly found on summits the Ap horizon ranges from up to 0.5 foot in depth and consists of a friable, reddish brown (5YR 4/4) sandy clay loam. It typically rests on a Bt horizon or red (2.5YR 4/8) clay or clay loam which extends to 3.8 foot in depth.

The Davidson soils are represented by one type, Davidson clay loam. The A horizon of this soil consists of 0.5 foot of reddish brown (5YR 4/4) clay loam laying on a B horizon of reddish brown (5YR 4/4) clay to a depth of four to 15 feet thick.

Erosion here, like elsewhere in this portion of the Piedmont, is primarily the result of increasingly erosive land-use activities during the postbellum, peaking by the early twentieth century (see Trimble 1974). Trimble notes that Rutherford County has likely seen the loss of between 0.8 and 1.1 feet of soil, primarily the result of poor agricultural techniques. Although agricultural practices are considerably different today, erosion can still be locally severe, especially depending on the activities which take place. For example, wildfires can result in the erosion of up to about 0.05 ton per acre per year. However, mechanical site preparation, typically found in many timber stands, can cause the extraordinary erosion rate of 0.45 tons per acre per year (U.S. Department of Agriculture 1983:25).

Florestics

Today, three centuries of human action have dramatically altered the Piedmont vegetation, creating a patchwork of forest land dominated by pine and cultivated land, including pasture. Early settlers found a continuous oak-hickory forest on the uplands and a mixture of broadleaf species on the floodplains. The clearing, cultivation, and subsequent abandonment of land not only promoted erosion, but also the sub-climax dominance of pine. Most of Rutherford County is covered in shortleaf pine, although Virginia pine is common on the more northern and mountainous areas of the county. Fertile upland areas may support southern red oak, white oak, and mockernut hickory. The understory may contain dogwood and sourwood. Dry sites with thin, eroded soils may support post oak, scarlet oak, and shagbark hickory. Sycamore, sweet gum, tulip poplar, willow oak, and ash are common on the floodplains. In the more upland, cool areas occasional remnants of mountain flora such as hemlock, white pine, and rhododendron may still be found.

The project area is currently a nearly level flood plain for Hollands Creek. Small farms and homesteads, with terraced fields and yards, are found north and south of the survey corridor. Approximately 50% of the corridor consists of wooded vegetation with the remaining 50% being used as pasture for cattle. Hardwoods, such as red oak and dogwood, flourish within the wooded areas, along with an understory of scrub oak and briers.

Evidence of recent inundation of the flood plain along Hollands Creek is found throughout the survey corridor. Leaves and other debris would indicate a foot or more of water has overflowed the main channel. Although not all of recent origin, creek sand was found to vary in depths ranging from 0.5 to 2.0 feet over the natural Cecil soils.

BACKGROUND RESEARCH

Previous Research

Previous research in the Rutherford County area has been dominated by cultural resource management surveys (for example, see, Ayers 1983, Padgett 1984). Important historic sites, such as the Bechtler Mint site (31RF157**) located about 3.1 mile north of Rutherfordton, have been excavated in the last decade (Trinkley and Hacker 1995).

Only three surveys have been previously conducted near the present survey tract (Garrow and Gheesling 1977, Youngs 1979, Barr 1998). One, a botanical, historical, and archaeological survey, was conducted by Garrow and Gheesling in 1977 for the expansion of the Spindale Wastewater Treatment Plant. This plant is located just west of the current project area. No cultural resources were recovered or sites recorded during this survey (Garrow and Gheesling 1977).

A second survey was conducted north of the project area by Youngs (1979). Two sites were located near the project area. Site 31RF110**, an early twentieth century pumping station, lies approximately 1.0 mile to the northwest. Site 31RF111**, a concrete bridge abutment, lies approximately 1.0 mile to the northeast of the Spindale Wastewater Treatment Plant and was relocated during the current survey.

The third, an intensive 90 acre survey, was conducted west of the project area by Chicora Foundation, Inc. in January of 1998 (Barr 1998). Only one site, a dispersed homesite, was recovered. Site 31RF158** lies about 2,000 feet south of the west end of the current project corridor.

Prehistoric Overview

Overviews for North Carolina's prehistory, while of differing lengths and complexity, are available in virtually every compliance report prepared. There are, in addition, some "classic" sources well worth attention, such as Joffre Coe's *Formative Cultures* (Coe 1964), as well as some new general overviews (such as Ward 1983). These can be supplemented with a broad range of theses and dissertations produced by students of North Carolina's colleges and universities. Also extremely helpful, perhaps even essential, are a handful of recent local synthetic statements, such as that offered by Sassaman and Anderson (1994) for the Middle and Late Archaic. Only a few of the many sources are included in this study, but they should be adequate to give the reader a "feel" for the area and help establish a context for the various sites identified in the study area. Figure 8 offers a generalized view of North Carolina's cultural periods.

In the Carolina Piedmont, lithic scatters are the most common type of prehistoric site encountered. Goodyear et al. (1979:131-145) found that sites containing lithic scatters located in the inter-riverine Piedmont were geographically extensive and exhibited little artifact diversity. These sites have been interpreted as:

> limited or specialized activity sites which represent resource exploitation or other distinct functions. Nearly all investigators working in the Piedmont have related these sites to activities involving hunting, nut gathering, and procuring of lithic raw materials (Canouts and Goodyear 1985:185).

Although the vast majority of these sites are located in eroded areas and exhibit little to no subsurface integrity, Canouts and Goodyear (1985) argue that they have analytical value. This value lies in their horizontal rather than vertical dimensions. They argue that:

> future investigators of upland sites must effect broad-scale

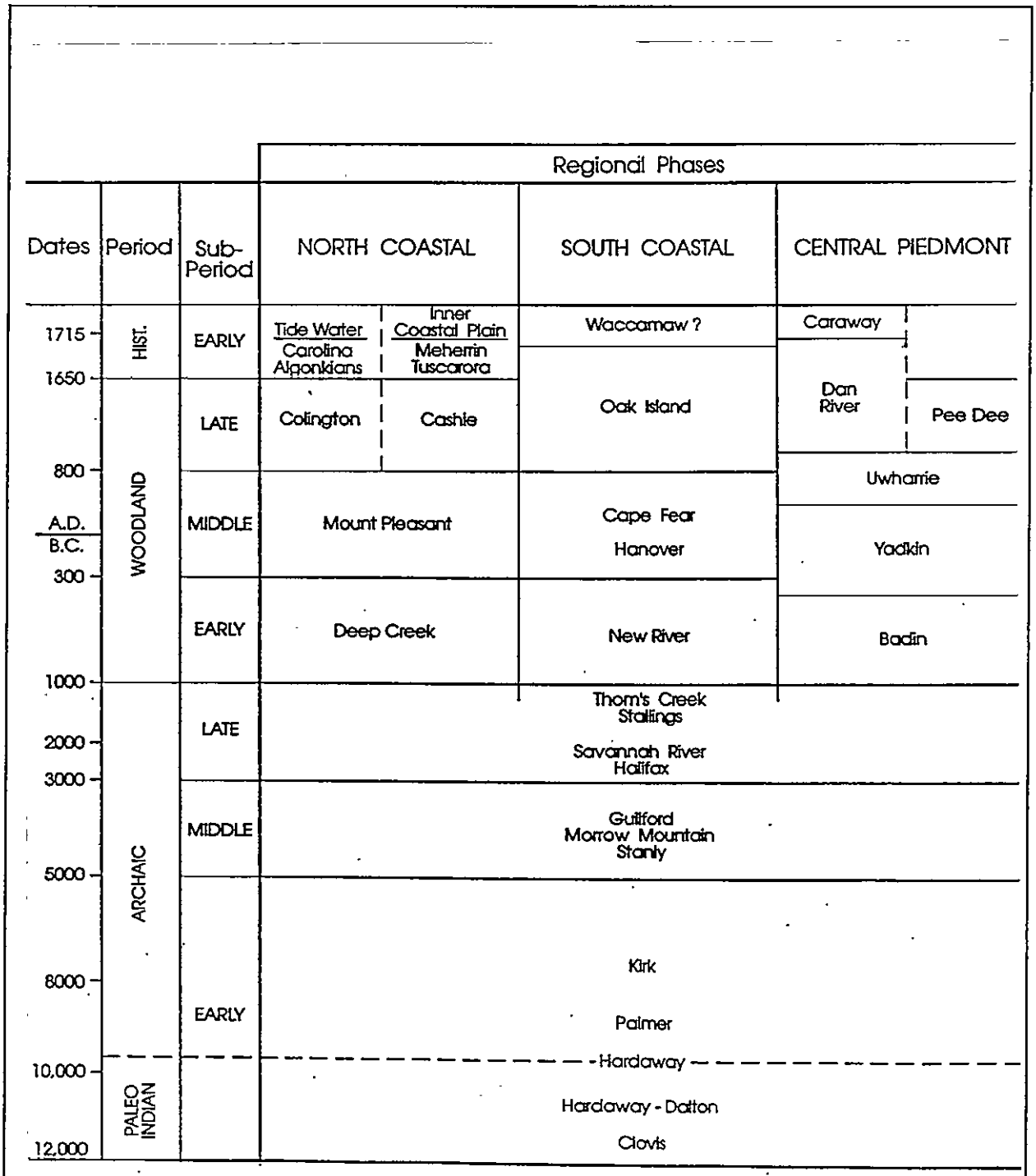

Figure 8. A generalized cultural sequence for the North Carolina coast and piedmont (partially adapted from Coe 1964:Figure 116 and Phelps 1983:Figure 1.2).

> spatial analyses comparable to the temporal analyses effected through excavation of deeply stratified sites. Both endeavors are necessary, and neither is sufficient for the total understanding of Piedmont prehistory" (Canouts and Goodyear 1985: 193).

One observation that Canouts and Goodyear (1985) made is that lithic raw material ratios change through time. For instance, at the Gregg Shoals site in Elbert County, Georgia, the Early Archaic assemblage reflects greater use of non-local cryptocrystalline materials and the Late Archaic, greater use of non-quartz local material (see Tippitt and Marquardt 1981).

Turning to South Carolina, Brooks and Crass (1991) have published a predictive model for historic resources on the Savannah River Site based on survey and archival data. While early pioneers settled on the Savannah River, by the late eighteenth century, settlements had progressed up the larger drainages. As better road systems developed in the nineteenth century, settlement became more road oriented (Brooks and Crass 1991:78-79). This suggests that historic settlement patterning may have changed very little through the county's history.

Paleoindian Period

The Paleoindian Period, most commonly dated from about 12,000 to 10,000 B.P., is evidenced by basally thinned, side-notch projectile points; fluted, lancelot projectile points; side scrapers; end scrapers; and drills (Coe 1964; Michie 1977; Williams 1965). Oliver (1981, 1985) has proposed to extend the Paleoindian dating in the North Carolina Piedmont to perhaps as early as 14,000 B.P., incorporating the Hardaway Side-Notched and Palmer Corner-Notched types, usually accepted as Early Archaic, as representatives of the terminal phase. This view, verbally suggested by Coe for a number of years, has considerable technological appeal.[1] Oliver suggests a continuity from the Hardaway Blade through the Hardaway-Dalton to the Hardaway Side-Notched, eventually to the Palmer Side-Notched (Oliver 1985:199-200). While convincingly argued, this approach is not universally accepted.

The Paleoindian occupation, while widespread, does not appear to have been intensive. Artifacts are most frequently found along major river drainages, which Michie interprets to support the concept of an economy "oriented toward the exploitation of now extinct mega-fauna" (Michie 1977:124). Survey data for Paleoindian tools, most notably fluted points, is rather dated for North Carolina (Brennan 1982; Peck 1988; Perkinson 1971, 1973; cf. Anderson 1990). In spite of this, the distribution offered by Anderson (1992b:Figure 5.1) reveals a rather general, and widespread, occurrence throughout the region.

Distinctive projectile points may include lancoelates such as Clovis, Dalton, perhaps the Hardaway, and Big Sandy (Coe 1964; Phelps 1983; Oliver 1985). A temporal sequence of Paleoindian projectile points was proposed by Williams (1965:24-51), but according to Phelps (1983:18) there is little stratigraphic or chronometric evidence for it. While this is certainly true, a number of authors, such as Anderson (1992a) and Oliver (1985) have assembled impressive data sets. We are inclined to believe that while often not conclusively proven by stratigraphic excavations (and such proof may be an unreasonable expectation), there is a large body of circumstantial evidence. The weight of this evidence tends to provide considerable support.

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[1]While never discussed by Coe at length, he did observe that many of the Hardaway points, especially from the lowest contexts, had facial fluting or thinning which, "in cases where the side-notches or basal portions were missing, . . . could be mistaken for fluted points of the Paleo-Indian period" (Coe 1964:64). While not an especially strong statement, it does reveal the formation of the concept. Further insight is offered by Ward's (1983:63) all too brief comments on the more recent investigations at the Hardaway site (see also Daniel 1992).

Unfortunately, relatively little is known about Paleoindian subsistence strategies, settlement systems, or social organization (see, however, Anderson 1992b for an excellent overview and synthesis of what is known). Generally, archaeologists agree that the Paleoindian groups were at a band level of society (see Service 1966), were nomadic, and were both hunters and foragers. While population density, based on isolated finds, is thought to have been low, Walthall suggests that toward the end of the period, "there was an increase in population density and in territoriality and that a number of new resource areas were beginning to be exploited" (Walthall 1980:30).

Archaic Period

The Archaic Period, which dates from 10,000 to 3,000 B.P.[2], does not form a sharp break with the Paleoindian Period, but is a slow transition characterized by a modern climate and an increase in the diversity of material culture. Associated with this is a reliance on a broad spectrum of small mammals, although the white tailed deer was likely the most commonly exploited animal. Archaic period assemblages, exemplified by corner-notched and broad-stemmed projectile points, are fairly common, perhaps because the swamps and drainages offered especially attractive ecotones.

Some researchers (see for example, Ward 1983:65) suggest that there was a noticeable population increase from the Paleoindian into the Early Archaic. This has tentatively been associated with a greater emphasis on foraging. Diagnostic Early Archaic artifacts include the Kirk Corner Notched point. As previously discussed, Palmer points may be included with either the Paleoindian or Archaic period, depending on theoretical perspective. As the climate became hotter and drier than the previous Paleoindian period, resulting in vegetational changes, it also affected settlement patterning as evidenced by a long-term Kirk phase midden deposit at the Hardaway site (Coe 1964:60). This is believed to have been the result of a change in subsistence strategies.

Settlements during the Early Archaic suggest the presence of a few, very large, and apparently intensively occupied, sites which can best be considered base camps. Hardaway might be one such site. In addition, there were numerous small sites which produced only a few artifacts — these are the "network of tracks" mentioned by Ward (1983:65). The base camps produce a wide range of artifact types and raw materials which has suggested to many researchers long-term, perhaps seasonal or multi-seasonal, occupation. In contrast, the smaller sites are thought of as special purpose or foraging sites (see Ward 1983:67).

Middle Archaic (8,000 to 6,000 B.P.) diagnostic artifacts include Morrow Mountain, Guilford, Stanly and Halifax projectile points. Phelps (1983:25) also notes that the gradual increase from Paleoindian to Archaic in the Coastal Plain seems to peak during the Middle Archaic Morrow Mountain phase. Much of our best information on the Middle Archaic comes from sites investigated west of the Appalachian Mountains, such as the work by Jeff Chapman and his students in the Little Tennessee River Valley (for a general overview see Chapman 1977, 1985a, 1985b). There is good evidence that Middle Archaic lithic technologies changed dramatically.

[2]The terminal point for the Archaic is no clearer than that for the Paleoindian and many researchers suggest a terminal date of 4,000 B.P. rather than 3,000 B.P. There is also the question of whether ceramics, such as the fiber-tempered Stallings ware, will be included as Archaic, or will be included with the Woodland. Oliver, for example, argues that the inclusion of ceramics with Late Archaic attributes "complicates and confuses classification and interpretation needlessly" (Oliver 1981:20). He comments that according to the original definition of the Archaic, it "represents a preceramic horizon" and that "the presence of ceramics provides a convenient marker for separation of the Archaic and Woodland periods (Oliver 1981:21). Others would counter that such an approach ignores cultural continuity and forces an artificial, and perhaps unrealistic, separation. Sassaman and Anderson (1994:38-44), for example, include Stallings and Thom's Creek wares in their discussion of "Late Archaic Pottery." While this issue has been of considerable importance along the Carolina and Georgia coasts, it has never affected the Piedmont, which seems to have embraced pottery far later, well into the conventional Woodland period.

End scrapers, at times associated with Paleoindian traditions, are discontinued, raw materials tend to reflect the greater use of locally available materials, and mortars are initially introduced. Associated with these technological changes there seem to also be some significant cultural modifications. Prepared burials begin to more commonly occur and storage pits are identified. The work at Middle Archaic river valley sites, with their evidence of a diverse floral and faunal subsistence base, seems to stand in stark contrast to Caldwell's Middle Archaic "Old Quartz Industry" of Georgia and the Carolinas, where axes, choppers, and ground and polished stone tools are very rare.

The available information has resulted in a variety of competing settlement models. Some argue for increased sedentism and a reduction of mobility (see Goodyear et al. 1979:111). Ward argues that the most appropriate model is one which includes relatively stable and sedentary hunters and gatherers "primarily adapted to the varied and rich resource base offered by the major alluvial valleys" (Ward 1983:69). While he recognizes the presence of "inter-riverine" sites, he discounts explanations which focus on seasonal rounds, suggesting "alternative explanations . . . [including] a wide range of adaptive responses." Most importantly, he notes that:

> the seasonal transhumance model and the sedentary model are opposite ends of a continuum, and in all likelihood variations on these two themes probably existed in different regions at different times throughout the Archaic period (Ward 1983:69).

Others suggest increased mobility during the Archaic (see Cable 1982), Sassaman (1983) has suggested that the Morrow Mountain phase people had a great deal of residential mobility, based on the variety of environmental zones they are found in and the lack of site diversity. The high level of mobility, coupled with the rapid replacement of these points, may help explain the seemingly large numbers of sites with Middle Archaic assemblages. Curiously, the later Guilford phase sites are not as widely distributed, perhaps suggesting that only certain micro-environments were used (cf. Ward [1983:68-69] who would likely reject the notion that substantially different environmental zones are, in fact, represented).

Recently Abbott et al. (1995) argue for a combination of these models, noting that the almost certain increase in population levels probably resulted in a contraction of local territories. With small territories there would have been significantly greater pressure to successfully exploit the limited resources by more frequent movement of camps. They discount the idea that these territories could have been exploited from a single base camp without horticultural technology. Abbott and his colleagues conclude, "increased residential mobility under such conditions may in fact represent a common stage in the development of sedentism" (Abbott et al. 1995:9).

From excavations at a Sandhills site in Chesterfield County, South Carolina, Gunn and his colleague (Gunn and Wilson 1993) offer an alternative model for Middle Archaic settlement. He accepts that the uplands were desiccated from global warming, but rather than limiting occupation, this environmental change made the area more attractive for residential base camps. Gunn and Wilson suggest that the open, or fringe, habitat of the upland margins would have been attractive to a wide variety of plant and animal species.

Another point of some controversy is the idea that the groups responsible for the Middle Archaic Morrow Mountain and Guilford points were intrusive ("without any background" in Coe's words) into the North Carolina Piedmont, from the west, and were contemporaneous with the groups producing Stanly points (Coe 1964:122-123; Phelps 1983:23). Phelps, building on Coe, refers to the Morrow Mountain and Guilford as the "Western Intrusive horizon." Sassaman (1995) has recently proposed a scenario for the Morrow Mountain groups which would support this west-to-east time-transgressive process. Abbott and his colleagues, perhaps unaware of Sassaman's data, dismiss the concept, commenting that the shear distribution and number of these points "makes this position wholly untenable" (Abbott et al. 1995:9).

The Late Archaic, usually dated from 6,000 to 3,000 or 4,000 B.P., is characterized by the appearance of large, square stemmed Savannah River projectile points (Coe 1964). These people continued to intensively exploit the uplands much like earlier Archaic groups within North Carolina, the bulk of our data for this period comes from the Uwharrie region.

One of the more debated issues of the Late Archaic is the typology of the Savannah River Stemmed and its various diminutive forms. Oliver, refining Coe's (1964) original Savannah River Stemmed type and a small variant from Gaston (South 1959:153-157), developed a complete sequence of stemmed points that decrease uniformly in size through time (Oliver 1981, 1985). Specifically, he sees the progression from Savannah River Stemmed to Small Savannah River Stemmed to Gypsy Stemmed to Swannanoa from about 5,000 B.P. to about 1,500 B.P. He also notes that the latter two forms are associated with Woodland pottery.

This reconstruction is still debated with a number of archaeologists expressing concern with what they see as typological overlap and ambiguity. They point to a dearth of radiocarbon dates and good excavation contexts yet, at the same time they express concern with the application of this typology outside the North Carolina Piedmont (see, for a synopsis, Sassaman and Anderson 1990:158-162, 1994:35).

In addition to the presence of Savannah River points, the Late Archaic also witnessed the introduction of steatite vessels (see Coe 1964:112-113; Sassaman 1993), polished and pecked stone artifacts, and grinding stones. Some also include the introduction of fiber-tempered pottery about 4000 B.P. in the Late Archaic (for a discussion see Sassaman and Anderson 1994:38-44). This innovation is of special importance along the Georgia and South Carolina coasts, but seems to have had only minimal impact in North Carolina.

There is evidence that during the Late Archaic the climate began to approximate modern climatic conditions. Rainfall increased resulting in a more lush vegetation pattern. The pollen record indicates an increase in pine which reduced the oak-hickory nut masts which previously were so widespread. This change probably affected settlement patterning since nut masts were now more isolated and concentrated. From research in the Savannah River valley near Aiken, South Carolina, Sassaman has found considerable diversity in Late Archaic site types with sites occurring in virtually every upland environmental zone. He suggests that this more complex settlement pattern evolved from an increasingly complex socio-economic system. While it is unlikely that this model can be simply transferred to the Piedmont of North Carolina without an extensive review of site data and micro-environmental data, it does demonstrate one approach to understanding the transition from Archaic to Woodland.

Woodland Period

As previously discussed, there are those who see the Woodland beginning with the introduction of pottery suggestive of influences from northern cultures. In the Piedmont, the Early Woodland is marked by a pottery type defined by Coe (1964:27-29) as Badin.[3] This pottery is identified as having very fine sand in the paste with an occasional pebble. Coe identified cord-marked, fabric-marked, net-impressed, and plain surface finishes. Beyond this pottery little more is known about the makers of the Badin wares than is known about those who made New River wares.

The dominant Middle Woodland ceramic type is typically identified as the Yadkin series. Characterized by a crushed quartz temper the pottery includes surface treatments of cord-marked, fabric-marked, and a very few linear check-stamped sherds (Coe 1964:30-32). It is regrettable that several of the seemingly "best" Yadkin sites, such as the Trestle site (31An19)

[3]The ceramics suggest clear regional differences during the Woodland which seem to only be magnified during the later phases. Ward (1983:71), for example, notes that there "marked distinctions" between the pottery from the Buggs Island and Gaston Reservoirs and that from the south-central Piedmont.

explored by Peter Cooper (Ward 1983:72-73), have never been published.

In some respects the Late Woodland (1,200 B.P. to 400 B.P.) may be characterized as a continuation of previous Middle Woodland cultural assemblages. While outside the Carolinas there were major cultural changes, such as the continued development and elaboration of agriculture, the Carolina groups settled into a lifeway not appreciably different from that observed for the previous 500-700 years. From the vantage point of the Middle Savannah Valley Sassaman and his colleagues note that, "the Late Woodland is difficult to delineate typologically from its antecedent or from the subsequent Mississippian period" (Sassaman et al. 1990:14). This situation would remain unchanged until the development of the South Appalachian Mississippian complex (see Ferguson 1971).

The Late Woodland is typically associated with small triangular points such as Uwharrie, Caraway, Pee Dee, and Clarksville (Coe n.d., 1964;49; Oliver 1985; South 1959:144-146). The characteristic pottery is the Uwharrie series which contains crushed quartz (one characteristic of which is its tendency to protrude through the wall of the pottery). This series included cord-marked and net-impressed surface treatments. The ware was described by Coe in the unpublished Poole site report (Coe n.d.).[4] This pottery appears to represent an evolution from the earlier Yadkin wares (Coe 1995:156). Of equal interest is a radiocarbon date of A.D. 1610, suggesting that this pottery lasted well into the protohistoric. Coe also notes that "Town Creek and other villages situated along the fall line between the Piedmont and the Coastal Plain seem to have formed a southern boundary for the production and use of Uwharrie ware," which he suggests was made by the ancestors of the Sara, Tutelo, Occaneechi, Saponi, and Keyauwee (Coe 1995:158). If this is correct, Uwharrie pottery may be exceedingly rare in the Piedmont.

[4]This study was intended to be published under a monograph series entitled, *University of North Carolina Laboratory of American Archaeology Publications*, but was never completed. The work was conducted in 1936, although the ensuing report is undated.

Historic Overview

The area which is today Rutherford County was originally used by both the Cherokee and Catawba Indians as hunting grounds (Youngs 1979:12). Contact between the Spanish and the Cherokee Nation occurred in the late 1500s. Later expeditions by James Needham and Gabriel Arthur in 1673 established trade routes with the Cherokee (Sharpe 1948:34). Numerous treaties for land were signed and wars fought by both North and South Carolina against the Cherokee. A major confrontation, which resulted in the destruction of a number of Cherokee villages and settlements was conducted by General Griffith Rutherford in 1776 (Carnes-McNaughton 1995:6). Yet, it was not until 1835 that the Cherokee, with the treaty of New Echota, ceded their remaining lands in North Carolina and Tennessee in exchange for a monetary payment and lands in present-day Oklahoma. By 1839 almost 1,000 Cherokee remained in North Carolina. At that time, William Holland Thomas, with permission from the United States government, purchased 50,000 acres, known as the Qualla Boundary, for their use (Van Noppen and Van Noppen 1973:21).

In the 1730s German and Scots-Irish immigrants from Pennsylvania settled in small communities where they retained many of their former manners and customs (Griffin 1937:4). By the 1740s and 1750s settlers from eastern North Carolina, South Carolina, and Virginia established farms in the area. Most of these settlements were located on fertile bottom lands found near the many creeks and streams found in present day Rutherford County (Van Noppen and Van Noppen 1973:21, Youngs 1979:13-14). Most of these families were agriculturalists who established small farms and, focusing on subsistence crops, cultivated corn, potatoes, peas and beans. Rutherford County, created in 1779, originally contained more than 1800 square miles and extending to the South Carolina border. By 1790 the general area contained a population of 7,808 souls. As the population of the Piedmont increased, portions of Rutherford County was used to create Buncombe,

Cleveland, McDowell, Henderson, and Burke counties.

During the Revolutionary War, the white settlers of western North Carolina were divided in their loyalties, although many supported the British (Gardner 1991:8). Although no major engagements are recorded in Rutherford County, a number of small skirmishes are recorded between local militia and British troops under the command of Colonel Ferguson (Youngs 1979:16). The only large engagements near Rutherford County took place in nearby Lincoln County. The Battle of Ramsour's Mill took place about 0.5 mile north of the city of Lincolnton, involving about 1,500 soldiers on both sides and claiming the lives of about 70 men (Baker 1991:1). This battle was the first patriot gain after the fall of Charleston to the British earlier in 1780 (Baker 1991:1). Three months later, on October 7, 1780, the British, under the command of Colonel Ferguson, were again defeated at the Battle of Kings Mountain by rebel militia units (Gardner 1991:8, Youngs 1979:17).

The successful agricultural economy that existed before the Revolution continued to develop through the late eighteenth century (Gardner 1991:8). In addition to the other crops, wheat and corn became successful economic crops in the late eighteenth century and along with cattle were shipped from Rutherford County south to Charleston and other South Carolina towns. Because most of the farms in Rutherford County at this time were small, there were few large slave owners (Griffin 1937:119-120).

By the early nineteenth century the Rutherford County economy diversified from the production of small crops to the addition of cotton as a major cash crop. Industries such as grist mills, tanneries, and iron manufacturers also became established (Youngs 1979:22-25). Grist mills were of such importance to the local communities that the General Assembly in 1758 and 1777 passed laws which regulated their construction and operation (Clark 1904: Volume XXIII). Although exact numbers are unknown, this industry seems to have been fairly substantial with private mills operating up to the 1930s. It is known that Richard O. Ledbetter operated a mill on Holland Creek in the late nineteenth century (Ledbetter et al. 1964:280). As well, gold mining was very significant to the economic base of the county in the 1830s and 1840s (Trinkley and Hacker 1995, Youngs 1979:29).

Like other areas throughout the South, Rutherford County suffered from the hardships brought on by the Civil War. Although the numbers are unknown, many men from Rutherford County volunteered for service, depleting the county of many of its agricultural workers. No major action occurred in Rutherford County during the Civil War, although scavenging by both sides aided in the destruction of many farms in the area. A number of industries were also affected by the Civil War. The tannery of the Grange Manufacturing Company was confiscated by the Confederate government for the manufacture of saddles for the army (Youngs 1979:25).

After the Civil War, agriculture once again grew in importance in the county. Major cash crops, such as cotton, tobacco, oats, and corn exceeded pre-war production. Sharecropping and renting farm land became common in the South after the Civil war. Sharecroppers paid landlords half of harvested crops in exchange for housing, land and the tools and animals necessary to work the land. Tenants who rented land paid the landlord in either crops or money for the land, housing and a portion of the fertilizer (Abbott and Adams 1996:21).

By 1871, the land area of Rutherford County contained about 566 square miles (Corbitt 1950:188-192) and the population had increased to 13,120 (Youngs 1979:18). The late nineteenth century also saw the arrival of the Wilmington, Charlotte and Rutherford (today the Seaboard Air Line) railroad in Rutherford County in 1887. A number of small railroad towns developed along the rail line in the Piedmont during the 1880s. Additional railways constructed in the county included the Southern Railway line from Camden, South Carolina to Marion completed in 1890, the Clinchfield and Ohio Railway from Marion to Spartenburg, South Carolina completed in 1910, and the narrow gauged Cliffside Railway

completed in 1907 (Youngs 1979:27-28).

During the early twentieth century, Rutherford County continued to develop an agricultural and industrial economy. The average farm size decreased during this period, although the number of farms increased. Tenancy continued to grow during this period. Cotton was grown in increasing quantities, and corn became the second most valuable agricultural product, followed by orchard crops, hay, potatoes and cane (Gardner 1991:14).

Industrially, in contrast to the iron, mining, and grist mill industries, the textile industries grew in the late nineteenth century. Although the first known textile mill in Rutherford County was a converted wheat mill purchased in 1874 by Mr. Homesley of Belmont, it was Raleigh Rutherford Haynes who is known as the father of the textile industry in Rutherford County. Between 1887 and 1896 Haynes, along with Spencer Tanner, established four mills in Rutherford County. Others followed and by 1935 there were "eleven textile corporations of 14 units, operating more than 200,000 spindles" (Youngs 1979:30-31).

Originally known as Coxe's Crossing, the town of Spindale was founded in 1916 with the establishment and construction of a series of textile mills by Simpson B. Tanner (Griffin 1937:598-599). These mills were quickly followed by the establishment of the Elmore Corporation, the Spinners Processing Company, the Stonecutter mill, and the Sterling Hosiery Mill (Youngs 1979:31). The town of Spindale was incorporated in 1923.

FIELD SURVEY AND RESULTS

Research Goals

The primary goals of this survey were to identify, record and assess the significance of archaeological sites within the proposed 1.25 mile Spindale Wastewater Treatment Plant outfall line survey corridor. The archaeological site identified was primarily evaluated for it's potential National Register eligibility under Criterion D: the site has yielded, or may be likely to yield, information important in prehistory or history. Obviously such an approach requires that the property must have information which can contribute to our understanding of the past and that the information be significant (i.e., that it is able to address important research questions). It is not necessary that the information be unique, nor is it necessary that the information be controversial or challenge orthodox position.

As Townsend et al. (1993:31) clearly indicate, it is sufficient that the information reinforces previously gathered information. There is an implicit assumption that such reinforcement derives from additional tests of archaeological theories, and that such tests are necessary, even essential, part of "doing " science. Failure to contentiously test, and refine, archaeological theories and perspectives will result in a stagnant discipline, or alternatively, a discipline where research is equated with the most recent intellectual fad.

In order to evaluate eligibility, we have adopted the approach suggested by Townsend et al (1993:32), which involves five steps:

- The sites data sets are identified (these may include ceramics, lithics, floral or faunal material, architectural remains, radiocarbon material, or a wide range of other categories of information;
- the historic context of the site is identified, providing a framework for evaluation;
- important research questions which the site's data sets can address are identified;
- the data sets are evaluated in terms of archaeological integrity (i.e., are the data sets sufficiently well preserved to address the research questions); and
- the information is evaluated in terms of its importance (i.e., how will it contribute to the archaeological context).

Since the approach outlined is intended to be used to provide supporting documentation to National Register nominations, not the review of a large number of archaeological sites, we have operationalized the approach by combining sets and making the process more appropriate for survey level review. For example, the archaeological and historic context has been largely developed in the preceding discussions of archaeology and history in Rutherford County. Further, we have emphasized only those research questions which we believe are important in relation to these archaeological and historic contexts, reducing the need to justify research questions in each site discussion.

Field Methodology

The proposed field techniques involved the excavation of shovel tests at 100 feet intervals along the 25 foot wide outfall line survey corridor. This interval would be maintained even in areas of steep slope and poorly drained soils. Areas of the survey corridor with bare ground would be visually surveyed.

All soil would be screened through ¼-inch mesh, with each test numbered sequentially. Each test would measure about 1 foot square and would normally be taken to subsoil or 1.5 feet lacking the presence of subsoil. All cultural remains would be bagged by provenience, with the exception of brick, mortar, and shell, which would be noted and discarded in the field. Shovel tests were to be sequentially numbered and recorded on the project maps. Notes would be maintained for profiles at any sites encountered.

The information required for the completion of North Carolina Office of the State Archaeologist site forms would be collected and photographs would be taken, if warranted in the opinion of the field director. For this survey, an archaeological site was defined as three or more artifacts within a 25 foot area. Modern garbage (dating to the last 50 years) was generally disregarded unless associated with earlier remains.

One transect, totaling 6,600 feet, was shovel tested. Shovel tests were excavated every 100 feet. No areas of steep slope, 10% or more, or surface visibility above 50% were encountered during the survey. The majority of the survey tract contained level to nearly level ground throughout the survey corridor. The remainder of the tract contained thick wooded areas which only allowed limited surface visibility of the ground during subsurface testing.

A total of 66 shovel test stations were examined. A total of 63, or 95.5%, of the shovel test stations were excavated in the survey tract. The remaining shovel test stations fell in areas with standing water and/or in areas containing asphalt, such as driveways or paved roads.

Results of the Survey

The majority of the survey corridor was concentrated on either the north or south side of Hollands Creek and never veered from the flood plain associated with the creek. Only one site (38RF111**) was identified during the intensive survey of the 1.25 mile outfall line survey corridor.

31RF111**

Site 31RF111** is an historic concrete bridge abutment located about 15 feet east of the intersection of Old Ross Road and Hollands Creek. The central UTM coordinates are N3915420 E419210. The elevation at the site is 840 feet above mean sea level (AMSL) (Figure 8).

Site 31RF111** was initially located by Kathyrn Youngs in 1979 during an historical archaeological survey of Rutherford County (Youngs 1979). Youngs states that

> This concrete abutment located on a bank of Holland's Creek was originally thought to be the remains of a mill site. Later inspection and lack of evidence revealed the remains to be that of an old road bridge abutment (Youngs 1979:104).

No artifacts were recovered and no assessment of the sites eligibility for inclusion on the National Register of Historic Places was made at that time.

Site 31RF111** was first encountered during the present survey through the course of routine shovel testing. Other than general observations, no other shovel tests were excavated at this site during the course of these investigations. Although a general surface collection was conducted, no cultural materials were observed or collected.

Unfortunately, the use of concrete for bridge abutment construction is widespread both spatially and temporally. It seems unlikely that the assemblage exhibits either the data sets or the integrity to provide meaningful information regarding historic period research topics (Townsend et al. 1993:32). Site 31RF111** is recommended as not eligible for inclusion on the National Register of Historic Places. Pending the concurrence of the State Historic Preservation Office, no further management activities are necessary.

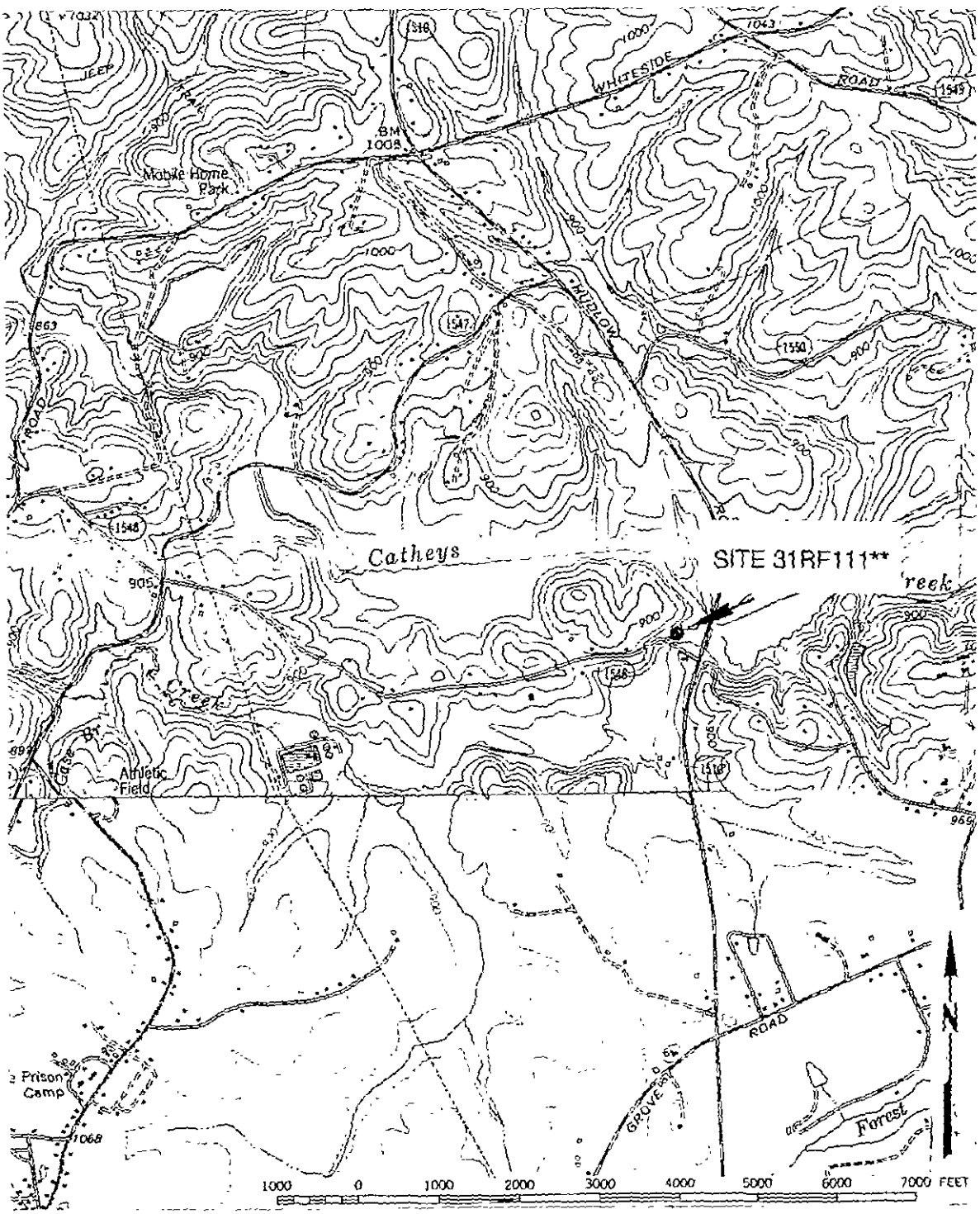

Figure 8. Location of site 31RF111** (USGS topographic map Rutherfordton North 7.5' 1993:1:24,000).

CONCLUSIONS

The primary goals of this study were twofold. One was to identify and assess cultural resources which might be present on the Spindale Wastewater Treatment Plant outfall line survey corridor. The second was to determine eligibility for inclusion on the National Register of Historic Places. This research is intended to collect sufficient information on the proposed Spindale Wastewater Treatment Plant outfall corridor to allow the State Historic Preservation Office to make a determination of the sites eligibility for inclusion on the National Register of Historic Places.

First and foremost, this study provides detailed information on the data sets present within the corridor slated for the construction of the proposed outfall line. Second, the **Background Research** provides an overview for the prehistoric and historic context for the sites.

For prehistoric Piedmont sites there remain a vast number of significant research questions, including such topics as the typological significance of the Morrow Mountain I and II divisions, the temporal refinement of a number of both Archaic and Woodland components, examination of the typological changes occurring in the transition from the Archaic to the Woodland periods, the origin and development of pottery in the Carolina Piedmont, and the delineation of base camp vs. mobile foraging activities and tool kits (especially during the Woodland Period).

For the historic period we know very little about land use in this section of North Carolina, or how the growth of slavery affected yeoman farmers. Very little is known about yeoman farmers in general, especially how their ethnicity might be reflected in the archaeological record. Tenancy, while well researched using historic documents is still very poorly understood archaeologically.

Thus, a whole range of questions are possibly for this section of North Carolina and we have presented only a few of the many important, and worthwhile, research topics which would help us better understand the prehistoric and historic heritage of the south central North Carolina Piedmont.

Yet, these questions must be evaluated in terms of the ability of the available data sets to address them. In other words, significant questions are, at times, easier to develop than it is to find data sets with the ability (or integrity) to answer those questions.

At 31RF111** the majority of the site has been displaced either by the construction of the new Hollands Creek/Old Ross Road bridge and time. No viable components of the bridge, such as materials associated with the span, exist which would tell of techniques used in its construction. The only remaining components of the bridge are the two concrete abutments. Their construction would be based not on type, but primarily on environmental factors and topography. The site appears to lack any integrity. Based on the information available, this site is recommended as not eligible for inclusion on the National Register of Historic Places.

The relative sparseness of archaeological sites on the project tract can be clearly associated with one primary factor — the low flood plain that dominates the project area. The area has been subjected to extensive deposition because of extreme flooding. At the time of the survey, water tables were found to be appreciably higher than normal and soils not normally flooded exhibited standing or subsurface water. Although this is not a routine situation, it does point out that the project area is in a zone that was little used by either prehistoric or historic groups.

In spite of the intensity of this survey there is always the possibility that archaeological sites

were not identified. Consequently, should archaeological remains, such as bones, stone tools, pottery, bottles, concentrations of bricks, or other similar materials be found during construction, the contractor should suspend operations and contact either Chicora Foundation or the North Carolina State Historic Preservation Office.

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